

REMARKS

In the Official Action mailed 27 April 2004, the Examiner reviewed claims 1-46. Claims 5 and 17 were rejected under 35 U.S.C. §112, second paragraph; claims 1-4 and 12 were rejected under 35 U.S.C. §103(a); claims 35-38, 42 and 46 were rejected under 35 U.S.C. §103(a); claims 6-9 were rejected under 35 U.S.C. §103(a); claims 10-11 were rejected under 35 U.S.C. §103(a); claims 26 and 29-30 were rejected under 35 U.S.C. 103(a); claims 39-41 and 43-45 were rejected under 35 U.S.C. 103(a); and claims 13-16, 18-25, 27-28 and 31-34 were allowed.

Applicant has amended paragraph [0030] in the specification. Applicant has amended claims 1, 5-9 and 35, and canceled claims 43-45. Claims 1-42 and 46 remain pending.

Each of the Examiner's rejections is respectfully traversed below.

Rejection of Claims 5 and 17 under 35 U.S.C. §112, second paragraph

Claims 5 and 17 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite based on the use of "figure 6 Protocol" in the claims. Claim 5 has been amended in view of amendments to its base claim.

Reconsideration is respectfully requested. The "Fig. 6 protocol" is a well known process for applying a fitting formula for the correction of hearing loss. See, Mead C. Killion & Selda Fikret-Pasa "The Three Types of Sensorineural Hearing Loss: Loudness and Intelligibility Considerations" The Hearing Journal, November1993. Applicant amends the specification to include citation to this article. The claim terms do not refer to a Figure in the specification, as the Examiner seems to suggest, but rather to the well known protocol.

Accordingly, reconsideration of rejected claim 5, as amended, and claim 17 is respectfully requested.

Rejection of Claims 1-4 and 12 under 35 U.S.C. §103(a)

Claims 1-4 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Christensson et al. (U.S. Patent No. 6,560,332) in view of Rao (U.S. Patent No. 6,141,415).

Applicant has amended claim 1 as set forth above to clarify the statement of the invention. In particular, claim 1 now includes the limitation reading:

determining an amplification gain based upon the near-end signal using a fitting formula for correction of hearing loss;

The specification has been amended to state, without change of scope, the inherent fact that the protocols of claims 5-9, as described in paragraph [0030] at page 10, lines 6-10, are examples of using such fitting formulas. By applying these formulas to the combined signal, it will have characteristics that improve the ability of listeners to hear the signal over the background noise in the room.

The references relied upon by the Examiner do not teach nor suggest use of fitting formulas, as the Examiner apparently recognizes due to the reliance on Walker et al. in rejection of claim 6 (see discussion of Walker et al. below). In fact, Christenson et al. and Rao are directed to different problems altogether. Christenson et al. is concerned with echo cancellation in an amplified signal, and not with improving listener perception of a combined output signal in view of background noise (see Christenson, et al., Summary, columns 2 and 3). Rao also relates to echo cancellation, and not improving listener perception of a combined output signal in view of background noise.

Claims 2-4 and 12 depend from claim 1 as amended, and are allowable for at least the same reasons, and because of the unique combinations recited.

Accordingly, reconsideration of rejected claims 1-4 and 12 as amended is respectfully requested.

Rejection of Claims 35-38, 42 and 46 under 35 U.S.C. §103(a)

Claims 35-38, 42 and 46 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kennedy et al. (U.S. Patent No. 6,377,825) in view of Rao (U.S. Patent No. 6,141,415).

Independent claim 35 has been amended to incorporate features like those of allowed claim 13, based on applying multiband noise processing, and applying multiband compression to a combined multiband signal in response to parameters determined based on the noise processing. Claims 36-38, 42 and 46 depend from claim 35, as amended.

Accordingly, reconsideration of rejected claims 35-38, 42 and 46 as amended is respectfully requested.

Rejection of Claims 6-9 under 35 U.S.C. §103(a)

Claims 6-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Christensson et al. (U.S. Patent No. 6,560,332) in view of Rao (U.S. Patent No. 6,141,415) as applied to claim 1, and further in view of Walker et al. (U.S. Patent No. 5,884,270). Claims 6-9 have been amended in light of changes to claim 1, from which they depend. Applicant respectfully requests reconsideration because the Examiner has mistakenly identified the “Cambridge protocol” mentioned in Walker et al. as that recited in claim 9. In fact, they are unrelated. Walker et al. mentions a publication named “Advances in Cryptology, Proceedings of the Cambridge Protocols Workshop 96,” that related apparently to cryptology. Walker et al. does not relate to fitting formulas in any sense. The Cambridge protocol recited in the claims is well known, and described for example in Moore, B.C.J.: “Use of a loudness model for hearing aid fitting. IV. Fitting hearing aids with multi-channel compression so as to restore “normal” loudness for speech at different levels” British Journal of Audiology, (2000) Vol. 34 No. 3, pp. 165 - 177, and Applicant has amended the specification to include this citation.

Accordingly, reconsideration of rejected claims 6-9 as amended is respectfully requested.

Rejection of Claims 10-11 under 35 U.S.C. §103(a)

Claims 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Christensson et al. (U.S. Patent No. 6,560,332) in view of Rao (U.S. Patent No. 6,141,415) as applied to claim 1, and further in view of Voroba et al. (U.S. Patent No. 6,091,965).

Claims 10 and 11 depend from claim 1 as amended, and are allowable for at least the same reasons, and because of the unique combinations recited.

Accordingly, reconsideration of rejected claims 10-11 as amended is respectfully requested.

Rejection of Claims 26 and 29-30 under 35 U.S.C. §103(a)

Claims 26 and 29-30 are rejected as being unpatentable over Christensson et al. (U.S. Patent No. 6,560,332) in view of Rao (U.S. Patent No. 6,141,415) as applied to claim 1, and further in view of Kennedy et al. (U.S. Patent No. 6,377,825).

Claims 26 and 29-30 depend from claim 1 as amended, and are allowable for at least the same reasons, and because of the unique combinations recited.

Accordingly, reconsideration of rejected claims 26 and 29-30 as amended is respectfully requested.

Rejection of Claims 39-41 and 43-45 under 35 U.S.C. §103(a)

Claims 39-41 and 43-45 are rejected as being unpatentable over Kennedy et al. (U.S. Patent No. 6,377,825) in view of Rao (U.S. Patent No. 6,141,415) as applied to claim 35, and further in view of Allen et al. (U.S. Patent No. 5,553,134).

Applicant has cancelled claims 43-45 in view of amendments to base claim 35. Claims 39-41 depend from claim 35 and are allowable for at least the same reasons, and because of the unique combinations recited.

Accordingly, reconsideration of rejected claims 39-41 as amended is respectfully requested.

Allowable Subject Matter

Claims 13-16, 18-25, 27-28 and 31-34 are allowed. Such claims are not amended.

CONCLUSION

It is submitted that this application is now in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fee determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (RXSD 1008-1).

Respectfully submitted,

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